

## Previous Award Recipients

### March 2011 Competition

Mawadda Al-Naeeli (MMB)

Erythropoietin and Obesity-induced Inflammation and Insulin Resistance

Mentor: Constance Noguchi

Michelle Bond (LCBB)

Elucidating the role of O-GlcNAc in Innate Immunity using *C. elegans* as a model

Mentor: John Hanover

Yanfen Liu (LMB)

Function and Regulation of Deubiquitinases in ER Protein Quality Control

Mentor: Yihong Yi

Ari Meerson (PECRB)

Assessing the Roles of Micro RNAs in Human Obesity and Type 2 Diabetes

Mentor: Leslie Baier

David Murray (LMB)

Structure and Molecular Mechanism of SNX8 Cargo Recognition

Mentor: James Hurley

Kyung Hyun Ryu (LGP)

Linking H3K27 Methylation and the Transcription Factor STAT5 in Mammary development

Mentor: Lothar Hennighausen

### September 2010 Competition

Emily Clough (LCDB)

Sexual Dimorphism in *Drosophila* from Genotype to Phenotype

Mentor: Brian Oliver

Christine Jao (LMB)

Structure of the ESCRT -I and -II Membrane Budding Assembly

Mentor: James Hurley

Reiner Jumpertz (PECRB)

Manipulation of the Gut Microbiota: Impact on Energy Balance in Humans

Mentor: Jonathan Krakoff

Leah Matzat (LCDB)  
RNA-mediated Tissue Specific Regulation of a Chromatin Insulator in *Drosophila*  
Mentor: Elisa Lei

Anthony Vecchiarelli (LMB)  
Mechanistic Studies of ATP-driven Biomolecular Patterning and Positioning  
Mentor: Kiyoshi Mizuuchi

## March 2010 Competition

Katerina Alexaki (GDDB)  
In Vivo Models of Serine Palmitoyltransferase Manipulation and Impact on Diabetes  
Mentor: Richard Proia

Joshua Chappie (LMB)  
Structural and Mechanistic Studies of Dynamin  
Mentor: Frederick Dyda

## September 2009 Competition

Robin Evans Stanley (LMB)  
Structural and Bio-chemical Characterization of the Autophagy PI3KC 3 Complex  
Mentor: James Hurley

Jin-Gu Lee (LMB)  
Biological function of Lysine<sup>29</sup>-linked Polyubiquitin Chain  
Mentor: Yhiong Ye

Anil Kumar Kamaraju (DB)  
Identification of Novel Small-Molecule Inhibitors of “SMAD 3” for Therapeutic Purposes  
Mentor: Sushil Rane

Qisheng Li (LDB)  
Discovery of Hepatitis C Virus Host Dependencies through Genome-wide Genetic Studies  
Mentor: Jake Liang

## March 2009 Competition

Edina Rosta (LCP)

Role of Proton Transfer in the Catalytic Reaction of RNase H

Mentor: Gerhard Hummer

Marie Thearle (PECRB)

Effects of Exenatide on Thermogenesis and Weight in Non-diabetic Obese Subjects

Mentor: Jonathan Krakoff

Yan Wang (MDB)

Menin Regulates the AKT Signaling Pathway through its Interaction with AKT

Mentor: Stephen Marx

Thomas Wollert (LMB)

Reconstitution of ESCRT-mediated Membrane Budding *in Vitro*

Mentor: James Hurley

## September 2008 Competition

Anna Allen (LBG)

Investigating Precocious Oocyte Maturation and the Calcium Wave in *C. elegans*

Mentor: Andy Golden

Anna Burkart (LCDB)

Role of a Cortical-Granule Metalloprotease in the Post-Fertilization Block to Polyspermy

Mentor: Jurrien Dean

Robert Brychta (CEB)

Optimizing Energy Expenditure Detection in Human Metabolic Chambers

Mentor: Kong Chen

Michelle Mondoux (LMB)

Analysis of Hexosamine Signaling in *C. elegans*: a Model of Insulin Resistance

Mentor: Michael Krause

Emmanuel Thomas (LDB)

A Novel Mechanism of Action of Ribavirin in Hepatitis C Antiviral Therapy

Mentor: Jake Liang

## March 2008 Competition

Nina Peel (LBG)

System-wide analysis of tubulin glutamylation in *C. elegans*

Mentor: Kevin O'Connell

Zachary Schultz (LCP)

Nanoscale Biomembrane Characterization: from model systems to intact cellular membranes

Mentor: Ira Levin

Yang Shen (LCP)

Protein structural patterns obtained from NMR chemical shifts using neural networks

Mentor: Ad Bax

Hariom Yadav (DB)

Role of TGF- $\beta$ 1 signaling in insulin resistance and adipogenesis

Mentor: Sushil Rane

Frances Yap (GBB)

Mechanism of Translational Regulation Inside the Ribosome Tunnel

Mentor: Harris Bernstein

## September 2007 Competition

Orsolya Barabas (LMB)

Directing Asymmetric DNA Transposons to Alternate Sequences

Mentor: Fred Dyda

Xin-Hua Liao (LCDB)

Functional Analyses of the TOR Kinase Complex TORC2

Mentor: Alan Kimmel

Deepak Sharma (LBG)

Molecular Mechanism Underlying Roles of Ssa Hsp70 Chaperones in Yeast Prion Propagation

Mentor: Daniel Masison

Pu Tian (GBB)

Two State Conformational Change of Membrane-embedded Beta Barrels

Mentor: Harris Bernstein

Athanasios Vasilopoulos (GDDB)

Role of BRCA1 in Mammary Cancer Stem Cells and Possible Therapeutic Implications

Mentor: Chuxia Deng

## March 2007 Competition

Michaeleen Callahan-Doucleff (LCP)

Characterizing the Target Search Process of a Multi-Protein Transcription Complex

Mentor: Marius Clore

Kan-Nian Hu (LCP)

Probing Protein Conformations in Unfolded States Using Solid-State NMR Techniques

Mentor: Robert Tycko

Erica Rosemond (LBC)

Elucidation of Novel Protein Partners of G-Protein Coupled Receptors

Mentor: Jurgen Wess

Keren Witkin (LMCB)

Yeast Nuclear Architecture and its Role in Regulating Nuclear Function

Mentor: Orna Cohen-Fix

## September 2006 Competition

Gagandeep Gahlay (LCDB)

Characterization of the Role of ZP2 in Post-Fertilization Block to Sperm Binding

Mentor: Jurrien Dean

Jean-Marc Guettier (CEB)

In Vivo Control of GPCR Signaling Pathways

Mentor: Jurgen Wess

Thomas Leonard (LMB)

Mechanistic Studies of Protein Kinase C

Mentor: James Hurley

Kathryn Stein (LBG)

Mechanism of spe-11-dependent Oocyte Activation in *C. elegans*

Mentor: Andy Golden

## March 2006 Competition

Meryem Bektas (GDDB)

Sphingosine-phosphate Lyase in Signaling

Mentor: Richard Proia

Rongjin Guan (LMB)  
Molecular Basis of Ligand Recognition by Human Toll-like Receptor 2  
Mentor: David Davies

Ying Huang (LDB)  
Negative Regulation of IFN Pathway by HCV Infection  
Mentor: Jake Liang

Jinfa Ying (LCP)  
Novel NMR Methods Applied to Studying HA Peptide-induced Membrane Fusion  
Mentor: Ad Bax

## September 2005 Competition

Robert Best (LCP)  
Coarse-Grain Models for Simulation of Protein Folding  
Mentor: William Eaton

Rodney Brister (LMCB)  
Characterization of the T4 Origins of DNA Replication  
Mentor: Nancy Nossal

Jordan Chill (LCP)  
Novel NMR Methodologies for Study of Membrane Proteins  
Mentor: Ad Bax

Lei Li (LCDB)  
Discovering New Potential Target Genes of  $\text{FIG}\alpha$   
Mentor: Jurrien Dean

Eric Liu (IAB)  
Beta Cell Regeneration and Immunology in Type 1 Diabetes  
Mentor: David Harlan

Jason Mears (LCBB)  
The Structural Basis of Mitochondrial Fission  
Mentor: Jenny Hinshaw

Cheryl Woolhead (GBB)  
Ribosome Nascent Chain Communication During Translation  
Mentor: Harris Bernstein

## March 2005 Competition

Keith Giles (LMB)

The Establishment of Heterochromatin in Vertebrate Cells

Mentor: Gary Felsenfeld

Bo Li (LBC)

Analysis of G Protein-Coupled Receptors in Yeast

Mentor: Jurgen Wess

Kusai Merchant (LCP)

Watching a Protein Fold by Single Molecule Fluorescence

Mentor: William Eaton

Anant Paravastu (LCP)

Structural Studies of Alzheimer's  $\beta$ -Amyloid Fibrils

Mentor: Robert Tycko